

US EPA ARCHIVE DOCUMENT

Partnering with Extension for Volunteer Water Quality Monitoring

Elizabeth Herron¹, Kelly Addy¹, Linda Green¹,
Kristine Stepenuck²,
Art Gold¹, and Robin Shepard²

¹ University of Rhode Island

² University of Wisconsin



Americans Volunteer: A Great National Habit*

- 44% of Americans (age 21+) volunteered in 2000
- Total of 15.5 billion hours
- Average volunteer commits 3.6 hrs/wk
- \$239 billion in value (2001)
(\$15.40 hourly rate)
- Water quality programs are wise to tap into this resource
- *www.IndependentSector.org



Why work with volunteers in water quality monitoring?

- Source of credible data
- More comprehensive data
 - Greater monitoring frequency
 - Larger # of sites monitored
- Local knowledge
- Enhances local stewardship
- Gain support for your efforts
- Cost effective (not cost free)



Main Uses of Volunteer Data

- Water Quality or Watershed Education
- Problem Identification
- Local Decision-making

(The Volunteer Monitor, US EPA, Spring 1994)



Program Design Elements

- Good design critical for success
- Must define goals and data uses

The Continuum of Volunteer Monitoring

Data Use → Education / Awareness Assess Impairment Legal & Regulatory

Increasing Time - Rigor - QA - Expense \$\$

Program Management Components

- Training & QA development
- Technical and logistical support
- Data management, interpretation & reporting
- Budget management
- Staff & volunteer management
- Maintain relationships with **partners, sponsors, & data users**



What is Cooperative Extension?

- Extension = community-based educators
- Mission: to bring science to the people, conduct educational outreach, and encourage “better practices”
- Land Grant University System - USDA
 - at least one in every U.S. state & territory
 - Water quality branch
- Large audience – volunteer monitoring can easily grow here



USDA CSREES

National Facilitation Grant Goals

- Build a comprehensive support system for Extension volunteer water quality monitoring efforts in the U.S.
- Expand & strengthen the capacity of existing Extension volunteer monitoring programs
- Support development of new groups



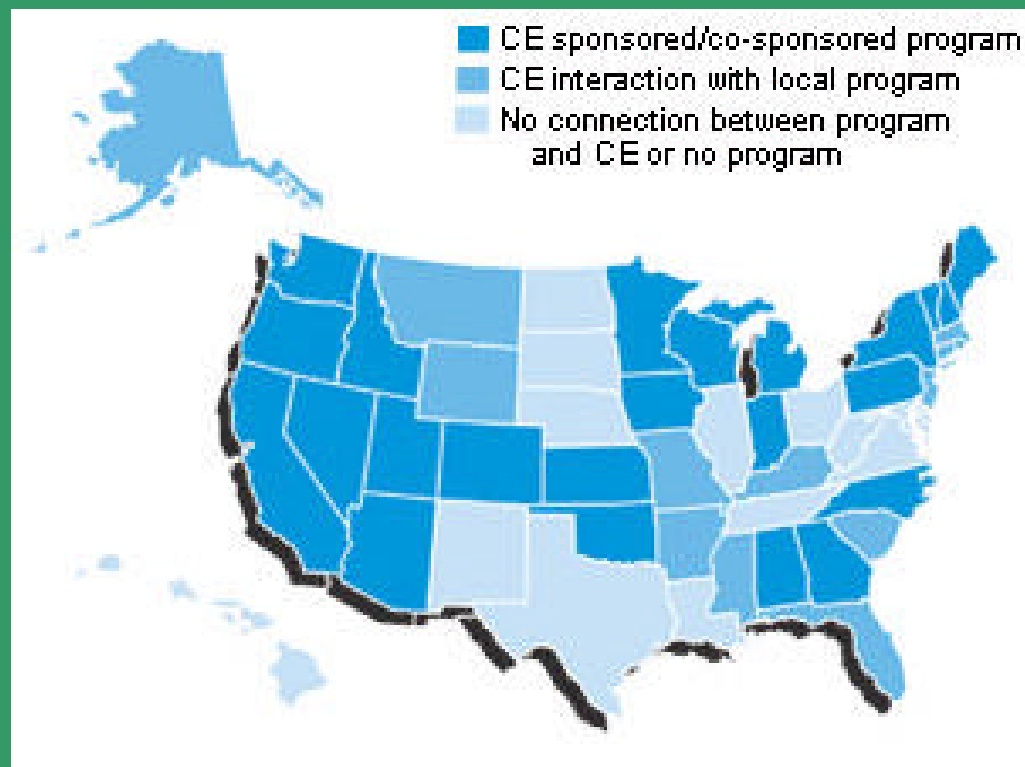
USDA CSREES

National Facilitation Grant Objectives

- Identify current Extension volunteer monitoring programs
- Develop multi-media training materials
- Offer training programs
- Develop & establish internet and web-based tools
- Increase collaboration & cooperation - within and outside of CSREES

Current Extension Programs

- Total of 38 programs associated with Extension identified
- Began as early as 1978 and as recently as 2002
- Monitor variety of habitats, including rivers, streams, lakes, ponds, wells, wetlands, & estuaries
- Inquiry results



Multi-media training materials

- “Guide to Growing” Extension Programs
 - Based on case studies of model programs
 - Modular format to ensure timeliness
 - Available in hardcopy and electronic formats
 - Why volunteer water quality monitoring makes sense *
 - Designing your monitoring strategy *
 - Effective training techniques*
 - Quality assurance issues
 - Volunteer management and support tools
 - Outreach tools
 - Finding support and funding for local efforts
 - Successful approaches to local data sharing and networking

Offer training programs

- Based on “Guide to Growing”
- Conduct training sessions offered through CSREES regional conferences and other venues
 - Pacific Northwest
(EPA region 10)
 - Southern
(EPA regions 4 & 6)
 - Arizona
(EPA region 9)



Develop & establish internet and web-based tools

- Developed online database that is being tested with the Water Action Volunteers (WAV) Program in WI
- Soon to be released fact sheet on database development and ongoing management





This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and support development of new groups.

Initiatives

Project Description (pdf file)
Outreach Materials and Activities

Nationwide Inquiry
Data Reporting

Extension Volunteer
Monitoring Programs

Related Research and
Educational Efforts

National Facilitation
Projects

NEMO
Best Education Practices
Pollution Assessment and Prevention

All outreach
materials to date,
Including fact
sheets, posters, and
presentations

Programs

3 K pdf file)

df file)

(1.6 M pdf file)

New!

ment

nd Funding
arking Barriers

Special Topics

Highlighted Program
Highlighted Program Archives
Job postings
National Water Monitoring Day

Upcoming Events

Galaxy II - National Extension Conf.



This Volunteer Water Quality Monitoring support system for Extension volunteer water quality monitoring and strengthen the capacity of existing water quality monitoring programs.

Results of Inquiry to Current Extension Programs on:

- Program Beginnings
- Training Techniques
- QA Measures
- Volunteer Support Tools
- Outreach Tools
- Program Funding

Initiatives

Project Description (382 K pdf file)

Outreach Materials and Activities

Nationwide Inquiry

Data Reporting

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

NEMO

Best Education Practices

Pollution Assessment and Prevention

Comprehensive goal is to expand development of

Programs

(3 K pdf file)

(pdf file)

New! (1.6 M pdf file)

ment

and Funding Working Barriers

m Archives

Monitoring Day

Upcoming Events

Galaxy II - National Extension Conf.



This
suppo
and

Guide for Growing Programs:

.pdf files of Guide modules ranging from designing your monitoring strategy for programs just starting out, to funding and overcoming networking barriers for more established programs

tion Project is designed to build a comprehensive
ing efforts across the country. The goal is to expand
monitoring programs and support development of
S.

Guide for Growing Programs

Using the Guide (803 K pdf file)

Why Monitoring
Makes Sense (582K pdf file)

Designing Your
Monitoring Strategy (1.6 M pdf file) **NEW!**

Effective Training

Quality Assurance

Volunteer Management

Outreach Tools

Locating Support and Funding

Overcoming Networking Barriers

Special Topics

Highlighted Program

Highlighted Program Archives

Job postings

National Water Monitoring Day

Upcoming Events

Galaxy II - National Extension Conf.

Initial

Project

Outrea

Nation

Data R

Exter

Moni

Relat

Educ

Natio

Proje

NEMO

Best Education Practices

Pollution Assessment and Prevention



This Volunteer Water Quality Monitoring support system for Extension volunteers and strengthen the capacity of existing

Link back to the
**USDA CSREES
National Water
Quality Program
web site**

designed to build a comprehensive water quality monitoring system across the country. The goal is to expand the program and support development of

Initiatives

Project Description (382 K pdf file)
Outreach Materials and Activities
Nationwide Inquiry **NEW!**
Data Reporting

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

NEMO
Best Education Practices
Pollution Assessment and Prevention



Guide for Growing Programs

Using the Guide (803 K pdf file)
Why Monitoring
Makes Sense (582K pdf file)
Designing Your
Monitoring Strategy (1.6 M pdf file) **NEW!**

Effective Training
Quality Assurance
Volunteer Management
Outreach Tools
Locating Support and Funding
Overcoming Networking Barriers

Special Topics

Highlighted Program
Highlighted Program Archives
Job postings
National Water Monitoring Day

Upcoming Events

Galaxy II - National Extension Conf.



**CSREES
National
Water Quality Program**

Applying knowledge to improve water quality



— Research, Education & Extension —

[Contacts](#) • [Event Calendar](#) • [Feedback](#) • [Reporting](#) • [Site Map](#)

[About this Program](#)

[Regional Programs](#)

[National Themes](#)

[National Facilitation](#)

[Extension Education](#)

[Integrated Research,
Education, and
Extension](#)

[Funded Projects](#)

[Success Stories](#)

[Online Resources](#)

[Home](#)

[Previous Page](#)

search this website:

Go!

Upcoming Events

[October 19 - 23:](#)

Southern Region
Extension Water Quality
Conference
Venue: Ruidoso, NM

[November 2 - 4:](#)

Water Environment
Federation; Animal
Residuals Conference
Venue: Arlington, VA

[November 4 - 8:](#)

North American Lake
Management Society
(NALMS) Annual
Conference
Venue: Mashantucket,
CT

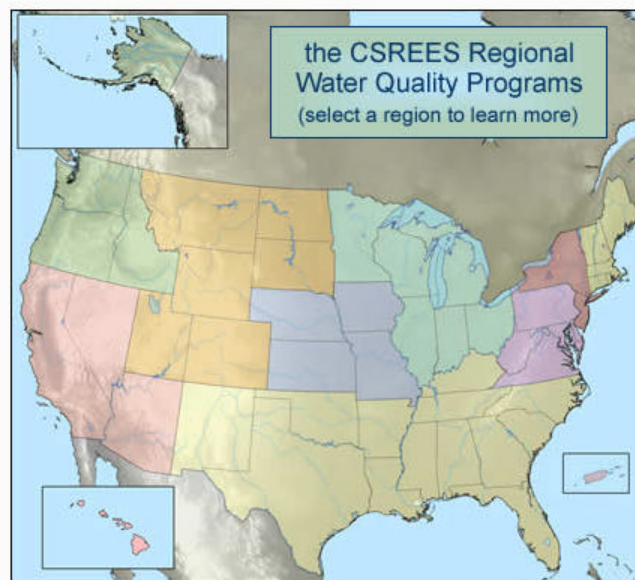
[January 11 - 15:](#)

USDA-CSREES
National Water Quality
Conference: Integrating
Research, Extension
and Education
Venue: Clearwater, FL

[more events are listed in
the event calendar...](#)

[Proceedings of the
2003 National Water
Quality Coordinators'
Conference](#)

January 11 - 15, 2004
[USDA-CSREES National Water Quality Conference:](#)
Integrating Research, Extension and Education
Clearwater, Florida





CSREES
National
Water Quality Program

Applying knowledge to improve water quality



[Home >>](#)
NATIONAL CONTACTS

Click on map to obtain
contact information of
State and Regional Water
Quality Coordinators:

These may be your initial
contacts for determining
local Extension interest in
volunteer water quality
monitoring

Michael P. O'Neill, Ph.D.
USDA-CSREES
Mail Stop 2210
1400 Independence Avenue, SW
Washington, D. C. 20250-2210

Phone: 202-205-5952
Fax: 202-401-1706
Email: moneill@csrees.usda.gov

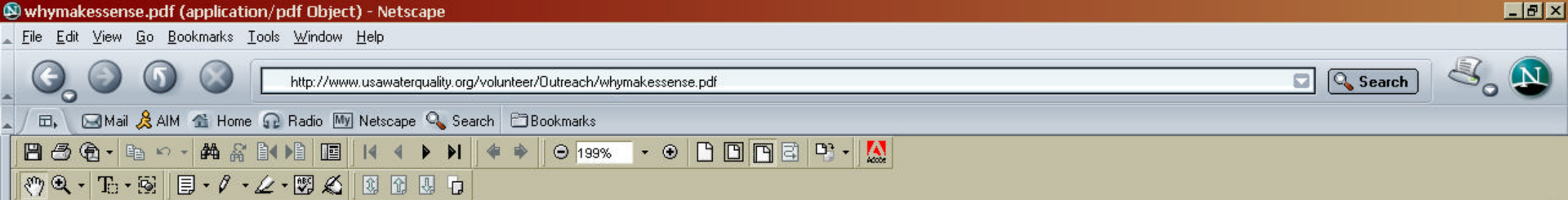
Use this map to locate regional contact information:



[Previous Page](#)

search this website:





December 2002
Factsheet II



Why Volunteer Water Quality Monitoring Makes Sense

University of Rhode Island

University of Wisconsin

Engages Citizens in Watershed Protection and Enhancement

Assessments of existing volunteer monitoring efforts within CSREES¹ suggest that volunteer water quality monitoring programs provide a unique opportunity to engage citizens in watershed protection and enhancement efforts. These programs have a unique capacity to:

- Address CSREES themes
- Help communities make informed decisions and improve water quality
- Capture the excitement and

Kelly Addy, Linda Green, Elizabeth Herron, and Kris Stepenuck
Addresses CSREES Themes

The Cooperative State Research, Education, and Extension Service

(CSREES) Water Quality Program, with funding from the U.S. Department of Agriculture

Extension, to provide technical assistance to volunteer water quality monitoring programs

throughout the United States. For more information, contact Kelly Addy at (608) 785-8888

or Linda Green at (608) 785-8889. E-mail: kadd@cesars.cesars.edu or lgreen@cesars.cesars.edu

or Elizabeth Herron at (608) 785-8888. E-mail: eherron@cesars.cesars.edu

or Kris Stepenuck at (608) 785-8888. E-mail: kstepenuck@cesars.cesars.edu

or Maureen Quisenberry at (608) 785-8888. E-mail: mquisenberry@cesars.cesars.edu

or Maureen Quisenberry at (608) 785-8888. E-mail: mquisenberry@cesars.cesars.edu

or Maureen Quisenberry at (608) 785-8888. E-mail: mquisenberry@cesars.cesars.edu

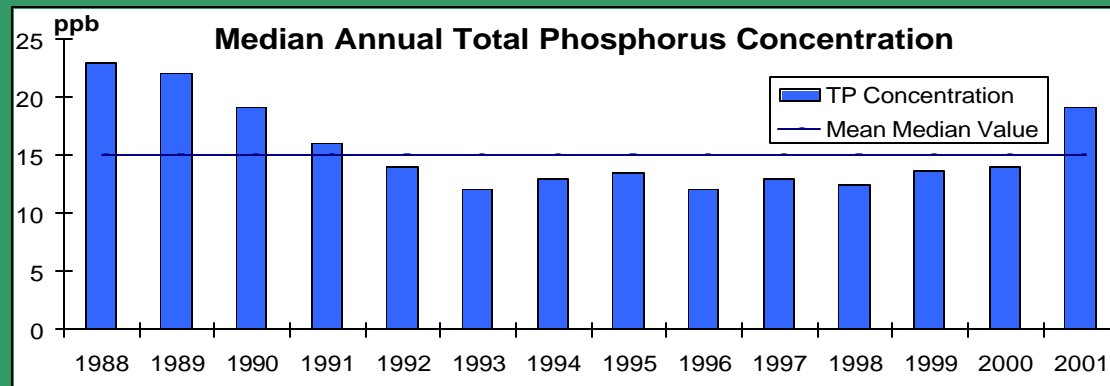
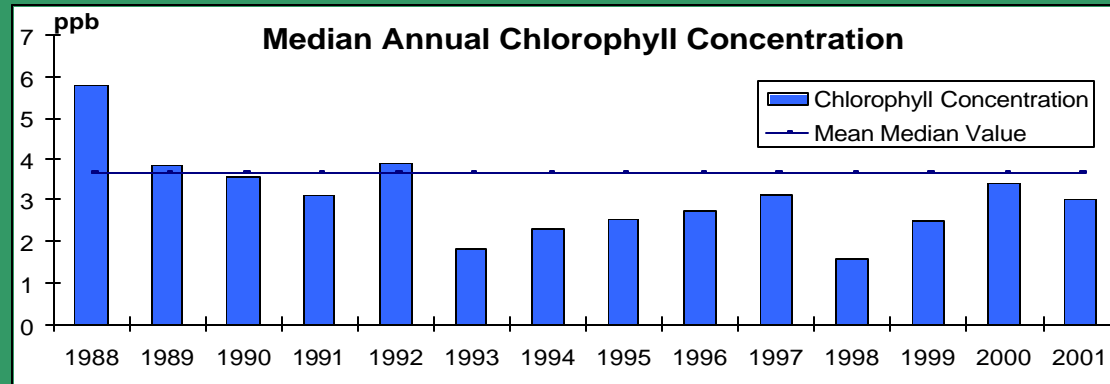
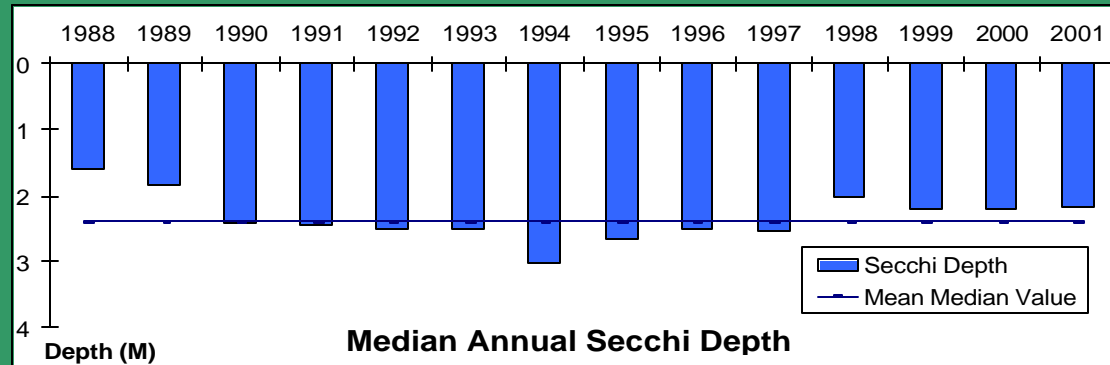
or Maureen Quisenberry at (608) 785-8888. E-mail: mquisenberry@cesars.cesars.edu

or Maureen Quisenberry at (608) 785-8888. E-mail: mquisenberry@cesars.cesars.edu

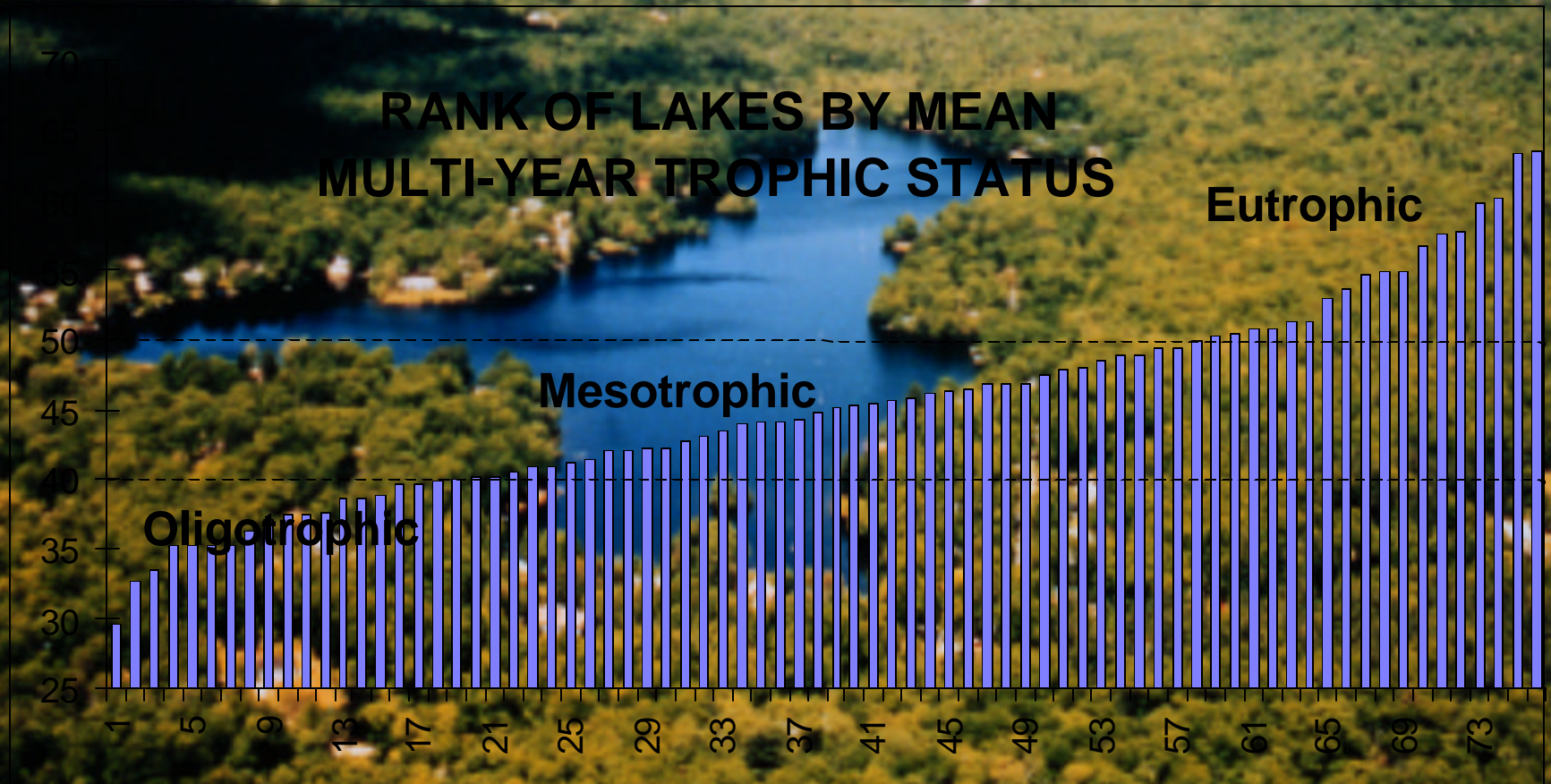
Some National Facilitation
Grant materials may be
helpful when approaching
Extension or other agencies
for assistance

Local Water Quality Trends

URIWW Locations
with 3 or more years
of data only

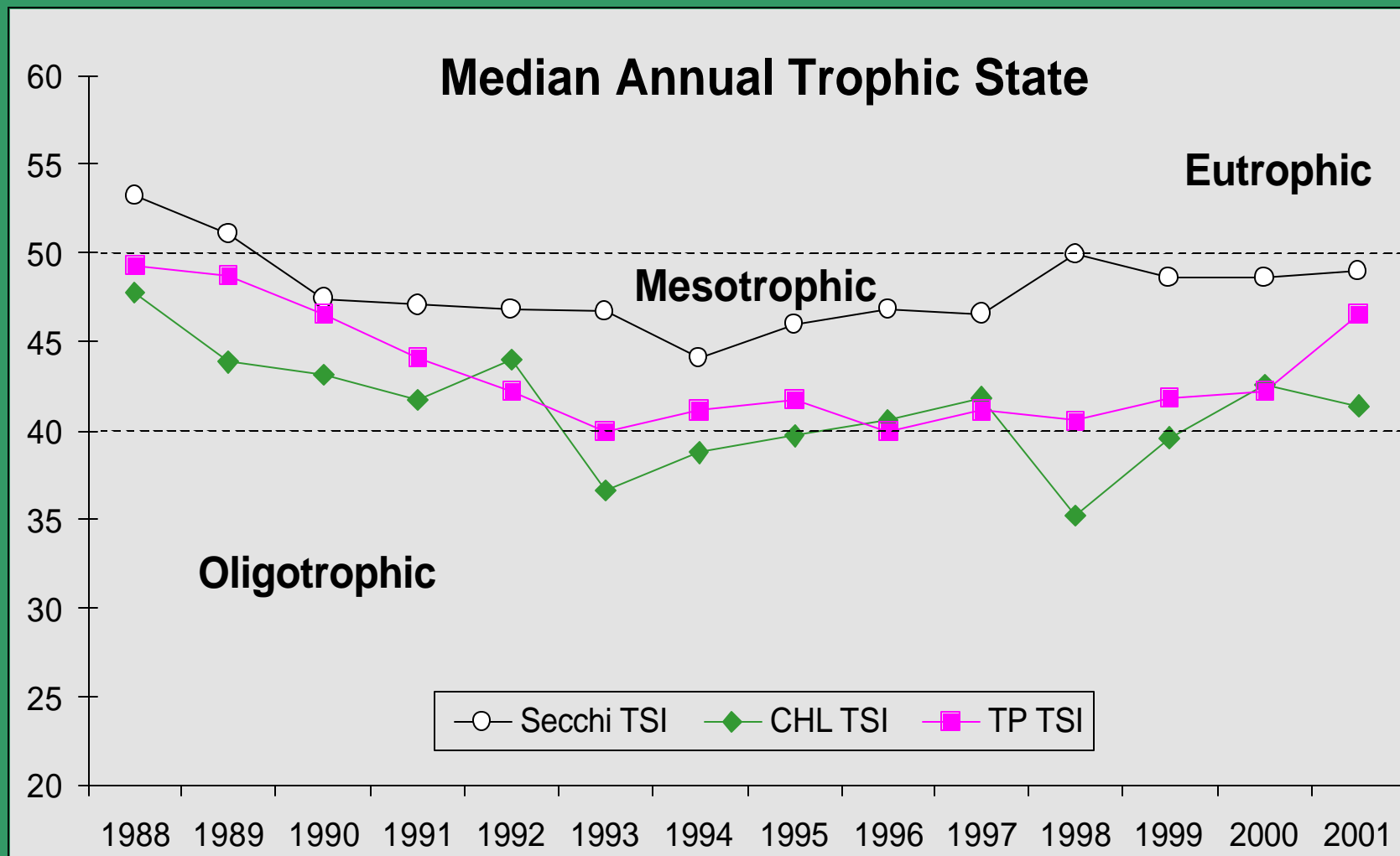


Distribution of Lakes by TSI

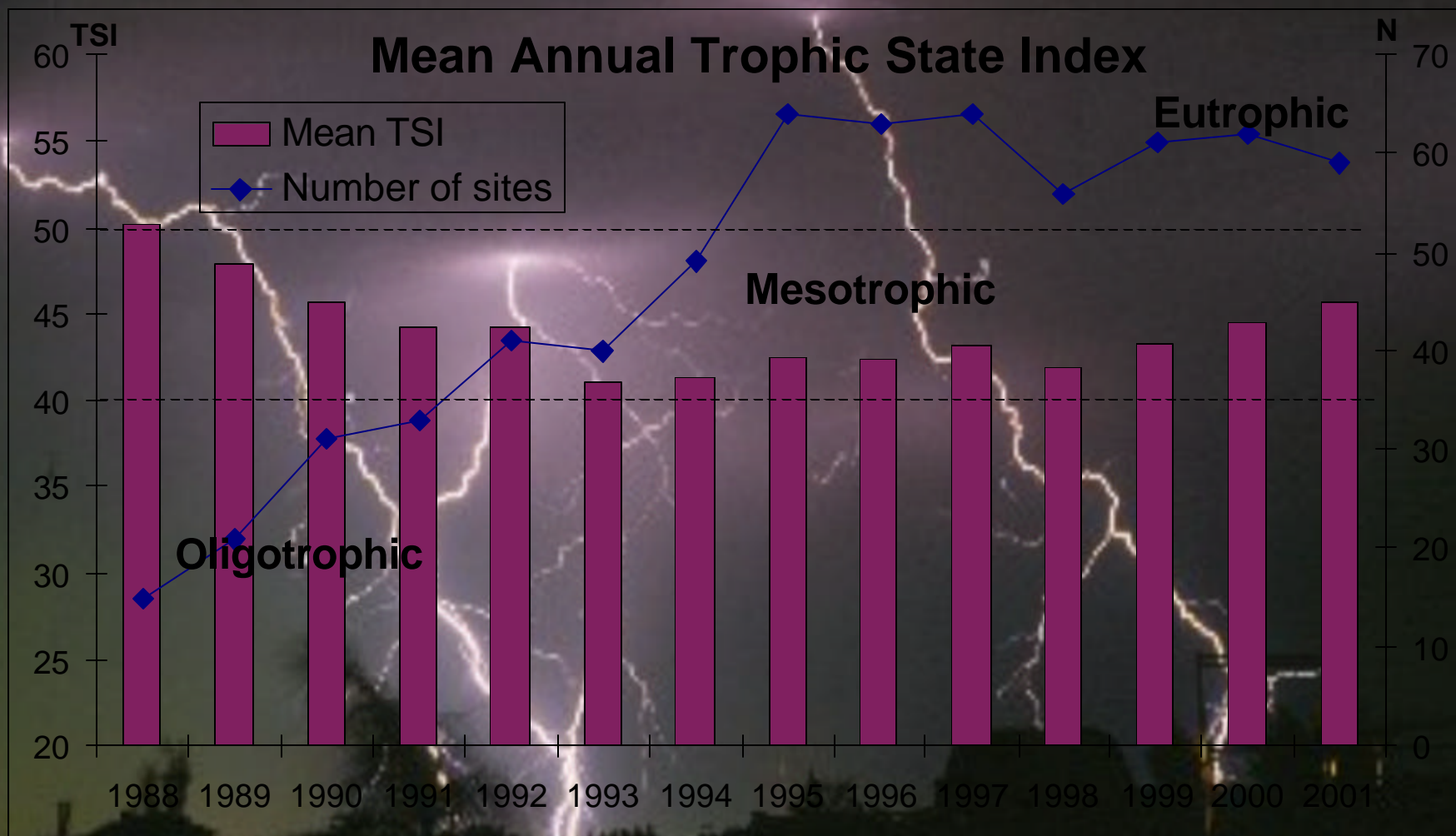


URIWW Locations with 3 or more years of data only

Trophic State Comparison



Overall WQ Trends



URIWW Locations with 3 or more years of data

By linking with Extension, Volunteer Water Quality Monitoring Programs:

- Gain valuable water quality data
- Educate the public on water quality or watershed issues
- Encourage citizens to adopt “lake-friendly” behaviors
- Bring university science to the community and the community to the university

Thank you for your attention

Please contact us to learn more:

Kelly Addy, kaddy@uri.edu

Linda Green, lgreen@uri.edu

Elizabeth Herron, emh@uri.edu

Kris Stepenuck, kris.stepenuck@ces.uwex.edu

Please visit our website:

www.usawaterquality.org/volunteer